

FIRST COMPRESSOR
MANUFACTURER IN THE
WORLD ACCREDITED

ISO 50001
ENERGY MANAGEMENT



BREATHING AIR PURIFIER

METALPLAN
AIRPOWER



A METALPLAN É A PRIMEIRA EM EFICIÊNCIA ENERGÉTICA

Líder absoluta em compressores de parafuso até 25 hp no país, a Metalplan é o primeiro fabricante* do mundo certificado ISO 50001 - Gestão de Energia, demonstrando seu compromisso com a eficiência energética, base para a sustentabilidade e a competitividade das empresas.

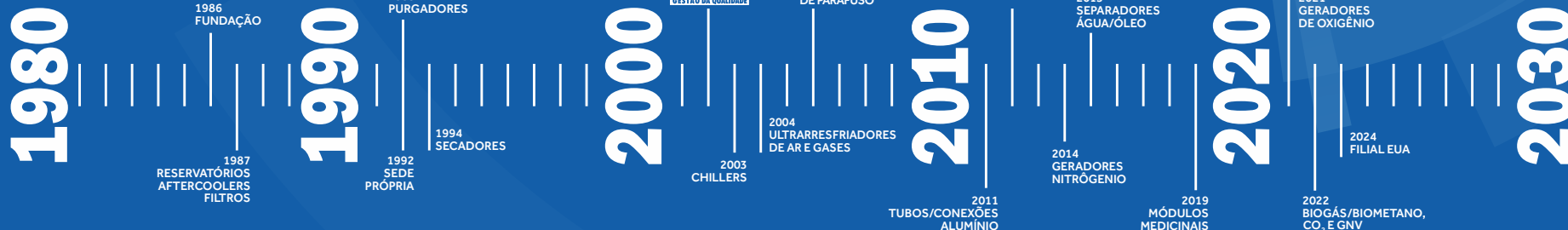
Fundada em 1986, possui área produtiva de 6 mil m², onde desenvolve equipamentos inovadores, com alto índice de nacionalização, exportando para mais de 20 países.

Sua rede de Distribuidores e Serviços Autorizados conta com mais de 300 empresas altamente especializadas e elevada cobertura geográfica, capazes de atender mais de 100 mil equipamentos em operação.

Nos últimos anos, a Metalplan vem expandindo suas fronteiras para tecnologias disruptivas em gases e energias renováveis, como a geração e compressão *on site* de nitrogênio, oxigênio, biogás, biometano, CO₂ e GNV.



*no segmento de ar comprimido, gases e refrigeração industrial



COMPRESSED AIR FOR HUMAN BREATHING

Local and international standards establish minimum quality standards for compressed air for human breathing in:

- Laboratories
- Sandblasting/Painting
- Tank cleaning
- Amateur and professional diving
- Mining
- Hospitals
- Areas at risk of infection
- Chemical Processing
- Handling of toxic products
- Rescue and salvage

Since the air generated by any type of compressor - lubricated or oil-free - is not breathable, the installation of a treatment system capable of removing all unwanted contaminants is mandatory.

To meet this demand, Metalplan has developed the INSPIRE, an "all in one" equipment that controls risks in environments contaminated by smoke, hydrocarbons, vapors, gases, solid particles, microorganisms, and other impurities.

The combination of coalescent filters, activated carbon filter, and adsorption dryer eliminates 100% of bacteria and provides a pressurized dew point of -40°C, equivalent to -60°C at atmospheric pressure. Additionally, its carbon monoxide catalyst reduces the presence of this lethal contaminant to levels completely safe for breathing, below 5 ppm.



MAXIMUM LIMITS OF CONTAMINATION OF COMPRESSED AIR FOR HUMAN BREATHING (RDC-50 - : National Health Surveillance Agency):

N ₂	Balance
O ₂	20.4% to 21.4% v/v oxygen
CO	Maximum 5 ppm v/v
CO ₂	Maximum 500 ppm v/v
SO ₂	Maximum 1 ppm v/v
NO _x	Maximum 2 ppm v/v
Oils and solid particles	Maximum 0.1 mg/m ³ v/v
Water vapor (dew point)	-45.5°C at atmospheric pressure



INSPIRE

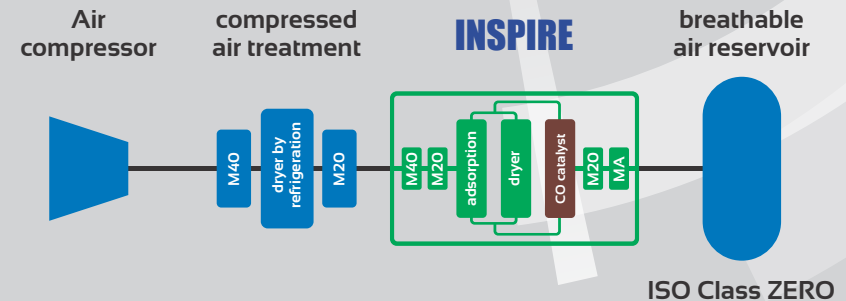
BREATHING AIR PURIFIER

OIL FREE

CO FREE

ISO CLASS ZERO

NBR 12188 ABNT



TECHNICAL DATA

Model	Nominal flow rate		Regeneration flow rate		NPT connections	Length	Height	Width	Weight
	pcm	m ³ /h	pcm	m ³ /h		mm	mm	mm	kg
INSPIRE - 015	15	25,5	2,25	3,83	L1/2" NPT	250	471	570	40
INSPIRE - 020	20	34	3	5,1	L1/2" NPT	250	471	570	40
INSPIRE - 030	30	51	4,5	7,65	L1/2" NPT	300	602	570	44
INSPIRE - 040	40	68	6	10,2	L1/2" NPT	300	744	570	50
INSPIRE - 050	50	85	7,5	12,75	L3/4" NPT	300	886	570	55
INSPIRE - 060	60	102	9	15,3	L3/4" NPT	300	1029	570	60
INSPIRE - 080	80	136	12	20,4	L3/4" NPT	300	1313	570	72
INSPIRE - 100	100	170	15	25,5	L1" NPT	300	1598	570	89
INSPIRE - 200	200	340	30	51	L1 1/2" NPT	450	1598	570	170
INSPIRE - 300	300	510	45	76,5	L1 1/2" NPT	750	1598	570	260
INSPIRE - 400	400	680	60	102	L1 1/2" NPT	900	1598	570	360
INSPIRE - 500	500	850	75	127,5	L1 1/2" NPT	1200	1598	570	450
INSPIRE - 600	600	1020	90	153	F2" ANSI B16.5 150	1350	1598	570	540
INSPIRE - 800	800	1360	120	204	F2" ANSI B16.5 150	1800	1598	570	700

Power: 45W



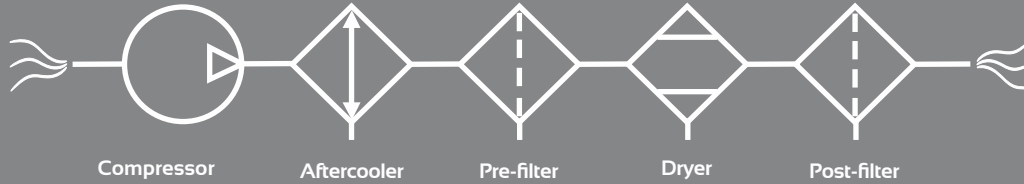
Next to a compressor and a dryer manufactured by Metalplan, an Inspire equips each mobile school set up by National Service for Industrial Training for dissemination and training on NR standards, which establish basic work safety criteria throughout Brazil.



COMPRESSED AIR FUNDAMENTALS



ISO 8573 STANDARD INSTALLATION



Compressor

Aftercooler

Pre-filter

Dryer

Post-filter

CONTAMINANTS & QUALITY CLASSES

class	SOLID PARTICLES maximum number of particles per m ³ (d = particle size)			class	WATER moisture dew point (°C)	class	OIL - total concentration (liquid/aerosol/vapor) (mg/m ³)
	0,1µm < d ≤ 0,5µm	0,5µm < d ≤ 1µm	1µm < d ≤ 5µm				
0	CLASS ZERO - as specified by the user or equipment supplier and stricter than Class 1						
1	≤ 20.000	≤ 400	≤ 10	1	-70	1	≤ 0,01
2	≤ 400.000	≤ 6.000	≤ 100	2	-40	2	≤ 0,1
3	-	≤ 90.000	≤ 1.000	3	-20	3	≤ 1
4	-	-	≤ 10.000	4	+3	4	≤ 5
5	-	-	≤ 100.000	5	+7	5	-
	Mass concentration - C _p (mg/m ³)	6	+10	6	-		
		Liquid Water C _w g/m ³)					
6	0 < C _p ≤ 5	7	C _w ≤ 0,5	7	-		
7	5 < C _p ≤ 10	8	0,5 < C _w ≤ 5	8	-		
8	-	9	5 < C _w ≤ 10	9	-		
9	-	X	C _w > 10	X	> 5		
X	C _p > 10						

ISO 8573 COMPRESSED AIR FOR GENERAL USE

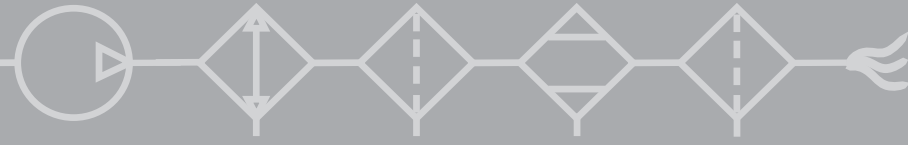
ISO 8573 is the international reference for compressed air systems, focusing on contamination levels.

The standard has various quality classes that serve multiple applications in industry and services, excluding human breathing and medicinal use.

Published in 1991, it was translated by Metalplan in 1992, positioning Brazil at the forefront of its utilization.

Its 3rd edition is from 2010, when Class Zero was introduced, with purity levels stricter than those found in Class One.

COMPRESSED AIR FUNDAMENTALS



ISO 8573 TYPICAL SYSTEMS	quality class	APPLICATIONS
	[1:6:1] ²	Dry air, with dew point between 5°C and 15°C. Ideal for low flows and protection of valves, cylinders, pneumatic tools, automation, blasting, painting, etc.
	[1:6:1] ² [1:6:0] ²	Activated carbon filter eliminates odors, with residual oil of 0.003 mg/m ³ , suitable for dental clinics and similar applications, except for human breathing.
	[1:4:1]	This is the most used treatment system in the industry. Its level of protection meets various sectors such as automotive, plastic, textile, paper, mechanical, metallurgical, etc.
	[1:4:0]	Quality similar to the previous system, with odor elimination and lower residual oil (0.003 mg/m ³), important in N ₂ and O ₂ generation and in the food, chemical, pharmaceutical industries, etc.
	[1:4:0]	Quality similar to the two previous systems, in terms of "water" and "solid particles". Meets Class Zero for the "oil" contaminant with total safety.
	[1:2:1]	Prevents vapor absorption when air comes into direct contact with hygroscopic materials (cement, resins, powdered or freeze-dried foods and pharmaceuticals). Prevents freezing when air is subjected to negative temperatures. Applied in the generation of gases of very high purity.
	[1:2:1] [1:1:1]	Low dew point and maximum particle retention are essential in the manufacture of optical fibers, chips, critical instrumentation, steelmaking, nuclear reactors, etc.
	[1:2:0] [1:1:0]	Quality similar to the two previous systems, in terms of "water" and "solid particles". Meets Class Zero for the "oil" contaminant with total safety.

1 Energy Plus and Titan Plus dryers have integrated pre and post-filters
2 only if the compressed air inlet temperature is < 25°C

Install an AQUA + condensate treatment system.

MARKS OF OUR HISTORY





AFTER-SALE SERVICES



96% OF CUSTOMERS FULLY SATISFIED

In an Annual ISO 9001 Audited Survey, we achieved a 96% customer satisfaction rate for Technical Assistance. This percentage corresponds to the evaluations above 7 (seven), on a scale of 0 (zero) to 10 (ten).

This success is due to over 70 authorized workshops and 200 accredited technicians throughout American continent, supported by an exclusive partnership with National Service for Industrial Training for mechanic training, making our After-Sales Service the most acclaimed in the market.



Typical facade

COMPREHENSIVE INVENTORY OF ORIGINAL PARTS



MAXIMUM EFFICIENCY IN AFTER-SALES SERVICE



70 WORKSHOPS CERTIFIED

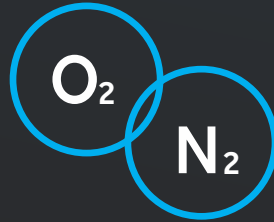
200 SPECIALIZED TECHNICIANS

OUR SOLUTIONS



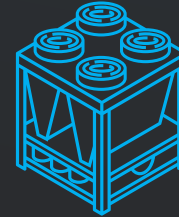
COMPRESSED AIR

- COMPRESSORS
- DRYERS AND FILTERS
- RESERVOIRS
- 100% ALUMINUM PIPING



OXYGEN & NITROGEN

- OXYGEN GENERATORS
PSA / VSA ON SITE
- NITROGEN GENERATORS
PSA ON SITE



INDUSTRIAL REFRIGERATION

- WATER CHILLERS
- ULTRA AIR AND GAS COOLERS (-35°C)
- THERMOCHILLERS
- DRY COOLERS



BIOGAS & CNG

- COMPRESSORS FOR BIOGAS, BIOMETHANE AND CNG
- BOOSTERS
- CHILLERS
- DISPENSERS

e-line

ROTARY SCREW COMPRESSORS



4 to 25 hp

REFRIGERATION DRYERS



20 to 250 pcm

ABSORPTION DRYERS



6 to 32 pcm

COALESCING FILTERS



25 to 300 pcm

AUTOMATIC DRAIN VALVES



electronic & magnetic

METALPLAN

www.metalplan.com.br
metalplan@metalplan.com.br
55 11 4448-6900 |

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